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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,290	06/14/2005	Thomas L. Haschen	4845-0101PUS2	3643
2292	7590	05/31/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			MAHAFKEY, KELLY J	
PO BOX 747			ART UNIT	
FALLS CHURCH, VA 22040-0747			PAPER NUMBER	

1761

DATE MAILED: 05/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/530,290

Applicant(s)

HASCHEN, THOMAS L.

Examiner

Kelly Mahafkey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 84-122 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 84-122 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The Amendments made March 7, 2006 have been entered.

Claims 84-122 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 84-122 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 84, 103, 105, 109, 112, 114, 115, 119-121 recite "over" and "greater than" certain percentages, thus indicating the end of the range as up to 100%. The specification discloses up to about 54% crude protein, up to about 83% RUP of the crude protein, up to about 2% methionine, and up to about 5% lysine, there was no support for a ranges of up to 100% in the specification at the time the application was filed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 87, 96-98, 109-111, 119-122 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 87, 96, 106, 110, 116, and 122 are indefinite because they recite, "RUP is increased in a range from about 27% to about 83%". It is unclear to the examiner as to what RUP source feed is increased and to the initial amount of RUP that is increased.

Claims 96, 106, 110, 116, and 122 are further indefinite because it recites, "Wherein the bypass level of the end product is adjusted and is increased..." It is unclear if the applicant is intending to adjust the composition before it is the final product or if the applicant is intending to claim a second invention.

The term "rapidly" in claim 97 is a relative term which renders the claim indefinite. The term "rapidly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear to the examiner as to what time limitation the term "rapidly" includes.

Claim 98 recites the limitation "drying temperature" in claim 84. There is insufficient antecedent basis for this limitation in the claim. Claim 84 recites, "adjusting the temperature and/or the moisture content of the enhanced nutrient value by-product nutrient source mixture", referring only to the temperature of the product; not referring to an atmospheric drying temperature or a drying step explicitly.

Claims 109-111 and 119-122 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission

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amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: a system for predictably enhancing nutrient value, a system for determining means, a system for mixing, and a system adjusting means. The claims recite a system, yet claim method steps with no structural elements to define the system. It is unclear in what statutory class of inventions.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 84-122 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heitritter et al. (US 5824355) in view of Smith et al. (US 5219596).

Heitritter et al. (Heitritter) teach a method of enhancing the nutrient value of feed or feed supplement for ruminant animals comprising:

- Determining the desirable levels of crude protein, UIP/RUP, amino acids and post ruminal digestibility in an end product;
- Creating a product base composed of an enhanced nutrient source, including soybean meal;
- Adjusting the temperature and/or the moisture content of the base composition to a temperature between 150-220F (i.e. including 208-210F, 211-220F, 180-220F, 218F, and a temperature at which proteins are caused to denature)

Heitritter teaches that the final product has the following characteristics:

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- Crude protein content of 47.2% (i.e. over about 30%, about 54%, and within the range of 30-50%);
- UIP/RUP content of 69.9% of the crude protein (i.e. over 50%, and in the range of 63-83%);
- Amino acid levels 3.8% lysine (i.e. greater than 1% methionine) and 12.8% methionine (i.e. greater than 2% lysine); and
- Post ruminal digestibility of the UIP/RUP of 60.7% (i.e. over 60%).
- Moisture content between 12-16% (i.e. including within the range 0-14%)

Regarding claims 109 and 119-121, Heitritter further teaches of a system and system elements for the method steps as outlined above. Refer specifically to Abstract, Column 1 lines 5-23, Column 2 lines 50-67, Column 3 lines 34 and 45-52, Column 4 lines 37-45 and 52-56, Column 5 lines 5-10, and Examples 1-5.

Heitritter, however, is silent to wet end distillers, brewers or fermenters grain byproducts, as part of the product base as recited in claims 84, 103, 105, 109, 112, 114, 115, 119-121, a specific ratio of wet end distiller's grain to soy meal as recited in claim 91, the percentage of RUP that has increased as recited in claims 87, 96, 106, 110, 116, and 122, a drying temperature of 350-500F as recited in claim 98, and to the parameters and equations as recited in claims 86, 89, 90, 94, and 95.

Regarding the addition of wet end distillers, brewers or fermenters grain byproducts to the product base as recited in claims 84, 103, 105, 109, 112, 114, 115, 119-121 and to a specific ratio of wet end distiller's grain to soy meal as recited in claim 91, Heitritter teaches of a protein and amino acid enhanced ruminant feed which

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includes soybean meal and other feed materials as stated in Column 8 lines 48-55.

Smith et al. (Smith) teaches that different feed materials, including the ones taught by Heitritter and further including other ruminant feed materials such as fermenters grain, can be combined in different proportions in order to produce a feed that has a specific desired protein and amino acid content. Smith teaches that the final feed composition desired depends on the body weight and level of production in the cattle. Refer specifically to Abstract, and column 3 lines 38-41. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a known feed for a ruminant animal, such as distillers grain, as taught by Smith, in the improved feed as taught by Heitritter. One would have been motivated to do so depending on the cattle weight and production. Because both deal with methods of enhancing ruminant feed specifically in regards to amino acid and protein content, and because Smith teaches of how to better customize that feed one would have a reasonable expectation of success from the combination.

Regarding the percentage of RUP that has increased as recited in claims 87, 96, 106, 110, 116, and 122, see the 112 rejections above. Heitritter teaches of increases the RUP% of crude protein that is digestible by 87% and increasing the overall amount of RUP in the crude protein by over 100% resulting in method steps and a product that is similar to applicants. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an increase in the amount of RUP depending on the desired final product and the amount of RUP in the starting material.

Regarding a drying temperature of 350-500F as recited in claim 98, Heitritter teaches that the feed product can be formed by heating from 150-220F or at those temperature ranges designed to prevent overcooking and/or burning of the moist meal feed (Column 4 lines 36-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include cooking at a temperature which prevented overcooking and/or burning of the moist meal feed while being most efficient for the heating element utilized.

Regarding claims 86, 89, 90, 94, and 95, Heitritter teaches that the final product contains over 30% crude protein, over 50% UIP/RUP in the crude protein, greater than 1% methionine, greater than 2% lysine, and post ruminal digestibility of the UIP/RUP of over 60%. Applicant has described the product with parameters and equations which cannot be measured by the office for prior art comparison, because the office is not equipped to manufacture prior art products and compare them for patentability purposes. Therefore, as a prima facie case of obviousness has been properly established, the burden is shifted to the applicant to show that the prior art product is different.

Response to Arguments

Applicant's arguments are based on the newly amended claims, claims 84-122, and the new limitations introduced into these claims. Applicant's arguments with respect to claims 84-122, have been considered but are moot in view of the new ground(s) of rejection as necessitated by the newly entered limitations.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nutrient Requirements of Dairy Cattle, 6th Edition (NRDC) Table 7.1 teaches of feeds commonly utilized for cattle and their corresponding nutrient levels.

Consumer Reports (CR) "What they eat and why" teaches that "the relative percentage of feed ingredients [for cattle] varies with price and availability".

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly Mahafkey whose telephone number is (571) 272-2739. The examiner can normally be reached on Monday through Friday 8am-4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



5/25/02

Kelly Mahafkey
Examiner
Art Unit 1761



KEITH HENDRICKS
PRIMARY EXAMINER